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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------|-------------|----------------------|---------------------|------------------|
| 10/717,617 | 11/21/2003 | Shyu-Mou Chen | 2846-0287P | 8203 |
| 2292 | 7590 | 10/21/2004 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH | | | KWOK, HELEN C | |
| PO BOX 747 | | | ART UNIT | |
| FALLS CHURCH, VA 22040-0747 | | | PAPER NUMBER | |
| | | | 2856 | |

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/717,617 | Applicant(s) CHEN ET AL. | |
| | Examiner Helen C. Kwok | Art Unit 2856 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figures 1a and 1b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities. Appropriate correction is required.

Under the "Brief Description of the Drawings", there is no brief description related to Figures 8a,8b,8c.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1-8,10,12-22 and 24-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 4, the phrase "the two proof mass" lacks antecedent basis. In lines 5-6, the phrase "the two proof mass" lacks antecedent basis.

In claim 2, lines 4-5, the phrase "the board" lacks antecedent basis and is vague. Which board is being referred to? In line 6, the phrase "the proof mass" is vague. Is this referring to the first proof mass or the second proof mass?

In claim 3, lines 1-2, the phrase "the second axis sensing beam" lacks antecedent basis. In line 6, the phrase "the electrodes" lacks antecedent basis. In line 6, the phrase "the two z-axis detection capacitors" lacks antecedent basis. In line 7, the phrase "the z-axis" lacks antecedent basis.

In claim 4, lines 8-9, the phrase "the first axis" lacks antecedent basis. In line 9, the word "beam" should be changed to – beams – to provide proper antecedent basis. In line 10, the phrase "the second axis" lacks antecedent basis.

In claim 5, lines 1-2, the phrase "the second axis sensing beam" lacks antecedent basis. In line 6, the phrase "the electrodes" lacks antecedent basis. In line 7, the phrase "the z-axis" lacks antecedent basis. Furthermore, the claim is indefinite because it is unclear how the second proof mass can have no groove as claimed in this claim when the proof mass does have grooves as claimed in claim 4. Please clarify.

In claim 6, lines 1-2, the phrase "the first axis sensing beam" lacks antecedent basis. In line 6, the phrase "the electrodes" lacks antecedent basis. In line 7, the

phrase "the z-axis" lacks antecedent basis. Furthermore, the claim is indefinite because it is unclear how the second proof mass can have no groove as claimed in this claim when the proof mass does have grooves as claimed in claim 4. Please clarify.

In claim 7, line 8, the phrase "the first sensing beam" lacks antecedent basis. In line 8, it appears that the word – a – should be inserted after the word "along". In line 10, the phrases "the first axis" and "the second axis" lacks antecedent basis. In line 13, the phrase "the others" is not clear on what it is being referred to? In line 27, the period at the end of the sentence should be deleted and replaced with a semicolon. In line 32, the phrase "the value" lacks antecedent basis. Furthermore, what value?

In claim 8, the claim is indefinite because it is unclear how the first proof mass encloses the second proof mass as claimed in this claim when in the second proof mass encloses the first proof as claimed in claim 7. Please clarify.

In claim 10, line 14, the word – a – should be inserted after the word "into".

In claim 12, line 6, the phrase "two areas" should be changed to – first and second areas – to provide proper antecedent basis. In line 20, it appears that the phrase "the first axis" should be changed to – the second axis --.

In claim 13, line 3, the word – a – should be inserted before the word "z-axis". In line 18, it appears that the phrase "the first axis" should be changed to – the second axis --.

In claim 14, line 3, the word – a – should be inserted before the word "z-axis".

In claim 15, line 3, the phrase "the proof mass" is vague. Is this referring to the first proof mass or the second proof mass?

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In claim 16, line 3, the phrase "the proof mass" is vague. Is this referring to the first proof mass or the second proof mass?

In claim 17, line 3, the phrase "the proof mass" is vague. Is this referring to the first proof mass or the second proof mass?

In claim 18, lines 1-2, the phrase "the acceleration signal" lacks antecedent basis. In line 2, the phrase "the respective detection capacitors" lacks antecedent basis.

In claim 28, line 2, the phrase "the second axis" lacks antecedent basis. In line 2, what signals? In line 2, the phrase "the second axis" lacks antecedent basis.

In claim 33, line 1, the phrase "the grooves" lacks antecedent basis. In line 2, the phrase "the grooves" lacks antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 9, 18 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,504,385 (Hartwell et al.).

With regards to claims 9, 18 and 23, Hartwell et al. discloses a three-axis motion sensor comprising, as illustrated in Figures 1-7, a main structure 10 made of electricity conductive material (i.e. silicon wafer) including a proof mass 50 connected to a 40 frame by several sensing beams 56; the frame is fixed between two boards 20,30; wherein the sensing beams make the proof mass movable along a first axis parallel to the boards and a z-axis perpendicular to the boards such that an acceleration signal is generated. (See, column 2, line 42 to column 4, line 16; column 6, line 53 to column 7, line 17).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited are related to acceleration sensor having at least a proof mass moving in at least one direction.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen C. Kwok
Art Unit 2856

hck
October 15, 2004